

CLAIM SET AS AMENDED

1-7. (Cancelled)

8. (Currently Amended) A metal carrier for a catalyst comprising:

a honeycomb structure shaped in a cylindrical form made of ferritic stainless steel and having a catalyst layer formed thereon, said honeycomb structure having a plurality of air vents, ~~the honeycomb structure having alternating waved plates and base plates, the waved plates having first sections that are substantially flat, and each of the base plates having an inner and an outer surface being disposed against the first flat sections of adjoining ones of the waved plates located inwardly and outwardly thereof, respectively, and the waved plates also having second sections extending outwardly from one of the base plates to the base plate immediately adjacent thereto, wherein the second sections of the waved plates are planar surfaces extending in an axial direction from one end of the metal carrier to another, thus forming the air vents~~ serving as passages extending from one end of the metal carrier to the other an opposite end of the metal carrier;

~~a~~ an oxidation resistant case covering an outer surface of the honeycomb structure, wherein the case is composed of ferritic stainless steel including Mo and phosphorous in order to provide oxidation resistance to the case at a temperature of 800°C or higher, said Mo content in the ferritic stainless steel ~~is in the range of 0.30 wt% < Mo < 2.50 being 1.20 wt%, and said phosphorous content in the ferritic stainless steel being 0.03 wt%,~~

wherein said catalyst layer ~~being~~ is formed on exposed surfaces of said honeycomb structure and on an interior surface of said cylindrical case, and since the material of the case

is the same as that of the honeycomb structure, a coefficient of linear expansion of the case is substantially the same as a coefficient of linear expansion of the honeycomb structure, thereby suppressing thermal deformation of the case, and

wherein each of the plurality of air vents existing at an outermost position of the honeycomb structure is formed by cooperation of an entire inner face of the case and a waved plate of the honeycomb structure.

9 - 12. (Cancelled)

13. (Original) The metal carrier for a catalyst according to claim 8, wherein the catalyst layer is a noble metal formed on the honeycomb structure.

14. (Original) The metal carrier for a catalyst according to claim 13, wherein the noble metal is platinum.

15. (Currently Amended) A metal carrier for a catalyst comprising:
a honeycomb structure shaped in a cylindrical form made of ferritic stainless steel, said honeycomb structure having a plurality of air vents, ~~the honeycomb structure having alternating waved plates and base plates, the waved plates having first sections that are substantially flat, and each of the base plates having an inner and an outer surface being disposed against the first flat sections of adjoining ones of the waved plates located inwardly and outwardly thereof, respectively, the waved plates also having second sections extending outwardly from one of the base plates to the base plate immediately adjacent thereto, wherein the second sections of the waved plates are planar surfaces extending an axial direction from~~

~~one end of the metal carrier to another, thus forming the air vents~~ serving as passages extending from one end of the metal carrier to the other an opposite end of the metal carrier;

~~a~~ an oxidation resistant case covering an outer peripheral surface of the honeycomb structure, wherein the case is composed of ferritic stainless steel including Mo and phosphorous in order to provide oxidation resistance to the case at a temperature of 900°C or higher, said Mo content in the ferritic stainless steel is 1.2 being in a range of 0.30 wt % to 2.50 wt%, and said phosphorous content in the ferritic stainless steel being 0.03 wt%, said Mo and phosphorous in the ferritic stainless steel limiting oxidation to about 0.57 wt% after of the oxidation resistant case is subjected to a temperature of 1000°C for 20 hours; and

a catalyst layer being formed on exposed surfaces of said honeycomb structure and on an interior surface of said cylindrical case, and since the material of the case is the same as that of the honeycomb structure, a coefficient of linear expansion of the case is substantially the same as a coefficient of linear expansion of the honeycomb structure, thereby suppressing thermal deformation of the case, wherein the plurality of air vents existing at an outermost position of the honeycomb structure is formed by cooperation of an entire inner face of the case and a waved plate of the honeycomb structure; and

~~when the metal carrier is subjected to a heating temperature of 1000° for 20 hours, an oxidation increase is less than 2 wt%.~~

16 - 17. (Cancelled)

18. (Previously Presented) The metal carrier for a catalyst according to claim 15, wherein the catalyst layer is a noble metal formed on the honeycomb structure.

19. (Previously Presented) The metal carrier for a catalyst according to claim 18, wherein the noble metal is platinum.

20. (Currently Amended) A metal carrier for a catalyst comprising:
a honeycomb structure shaped in a cylindrical form made of ferritic stainless steel and having a catalyst layer formed thereon, said honeycomb structure having a plurality of air vents, ~~the honeycomb structure having alternating waved plates and base plates, the waved plates having first sections that are substantially flat, and each of the base plates having an inner and an outer surface being disposed against the first flat sections of adjoining ones of the waved plates located inwardly and outwardly thereof, respectively, the waved plates also having second sections extending outwardly from one of the base plates to the base plate immediately adjacent thereto, wherein the second sections of the waved plates are planar surfaces extending an axial direction from one end of the metal carrier to another, thus forming air vents~~ serving as passages from one end of the metal carrier to the other an opposite end of the metal carrier;

~~a~~ an oxidation resistant case covering an outer surface of the honeycomb structure, wherein the case is composed of ferritic stainless steel including Mo and phosphorous in order to provide oxidation resistance to the case at a temperature of 800°C or higher, said Mo content in the ferritic stainless steel is 1.20 wt% and said phosphorous content in the ferritic stainless steel being 0.03 wt%, said Mo and phosphorous in the ferritic stainless steel limiting oxidation to about 0.48 wt% after the oxidation resistant case is subjected to a temperature of 950°C for 20 hours in a moisture added atmosphere comprising 90 vol % of a

mixture gas and a 10 vol % of water,

wherein said catalyst layer being formed on exposed surfaces of said honeycomb structure and on an interior surface of said cylindrical case, and since the material of the case is the same as that of the honeycomb structure, a coefficient of linear expansion of the case is substantially the same as a coefficient of linear expansion of the honeycomb structure, thereby suppressing thermal deformation of the case, and

wherein each of the plurality of air vents existing at an outermost position of the honeycomb structure is formed by cooperation of an entire inner face of the case and a waved plate of the honeycomb structure, and

~~when the metal carrier is subjected to a moisture added atmosphere comprising 90 vol % of a mixture gas and a 10 vol % of water, and to a heating temperature of 950° for 20 hours, an oxidation increase is less than 1 wt%.~~

21 - 22. (Cancelled)

23. (Previously Presented) The metal carrier for a catalyst according to claim 20, wherein the catalyst layer is a noble metal formed on the honeycomb structure.

24. (Previously Presented) The metal carrier for a catalyst according to claim 23, wherein the noble metal is platinum.

25 - 31. (Cancelled)

32. (Currently Amended) The metal carrier for a catalyst according to ~~claim 8~~ claim

15, wherein the Mo content in the ferritic stainless steel is ~~2.5 wt%~~ 1.20 wt%.

33. (Currently Amended) The metal carrier for a catalyst according to claim 15, wherein the case is composed of ferritic stainless steel including a phosphorous content of 0.30 wt%.

34. (Currently Amended) The metal carrier for a catalyst according to claim 20, wherein the case is composed of ferritic stainless steel including a phosphorous content of 0.30 wt%.